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ABSTRACT

The recommendation of the California Postsecondary Education Commission (CPEC) to reduce remedial activities is considered, along with arguments against reducing activities. In addition, the University of California's (UC) response to the recommendation is reviewed. CPEC's recommendation, which was first publicized in its 1983 report, "Promises to Keep," had the goal of ultimately reducing the need for remedial offerings. UC argued that there is a continuing need for remedial courses and activities and that it would be educationally irresponsible to force a reduction in remedial instruction on its campuses in the near future. Instead, UC should develop a plan to provide the instruction and academic support services necessary to students admitted to the university. It should also assess community college instruction, which might be an alternative to UC providing remedial instruction for UC students. Thirdly, UC should provide leadership to assist the secondary schools to improve the preparation of students. Concerns regarding teaching, instructional time and materials, and the idea that the community colleges can help solve the problem of underprepared students are addressed. Ten recommendations of the CPEC report are also identified. (SW)

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UNIVERSITY OF CALIFORNIA SAN DIEGO

Promises to Keep, Indeed,
and Miles to Go Before We Sleep

April, 1984

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Abstract

Remedial education is a current issue with implications for research, evaluation, and public policy. The California Postsecondary Education Commission (CPEC), in its recent report, Promises to Keep, has called on all segments of postsecondary education in California to reduce remedial activities "consonant with the principles of both quality and access". This recommendation is considered and arguments against reducing activities are presented. In addition, the University of California's response to CPEC's recommendation is reviewed.

The University of California responded to CPEC's recommendation in a report resulting from a 10-month review of the issue by the Committee on Remediation, composed of faculty, staff, and students. Essentially, the University argued that there is a "continuing need" for remedial courses and activities and that it would be "educationally irresponsible to force a reduction in remedial instruction on its campuses in the near future." However, efforts will continue to assist the secondary schools to improve the preparation of students.

Introduction

Research, evaluation, and policy-making activities in a multi-campus institution have a level of complexity that differs from single campus institutions. When legislative requests for information also require comparisons among several systems of postsecondary education, the complexity and complications are further increased. Over the past six years the University of California has conducted numerous studies which have required collaboration among the nine campuses and Systemwide Administration as well as between Systemwide and the California Postsecondary Education Commission (CPEC). CPEC was "created by the Legislature and the Governor in 1974 as the successor to the California Coordinating Council for Higher Education in order to coordinate and plan for education in California beyond high school. As a state agency, the Commission is responsible for assuring that the State's resources for postsecondary education are utilized effectively and efficiently; for promoting diversity, innovation, and responsiveness to the needs of students and society; and for advising the Legislature and the Governor on statewide policy and funding" (CPEC, 1983).

In the course of defining its research and policy interests, CPEC has held intersegmental meetings that have included representatives of the three segments of postsecondary education in California: the California State University (CSU), the University of California (UC), the California Community College System (CCC). These meetings have been used to develop common operational definitions for variables and comparable evaluation designs, where possible. In addition, the University of California has formed committees and teams of staff to design and conduct research projects of interest internally, as have the other segments. Both CPEC and the University of California consult with one another about policy issues as well.

In February, 1984, using funds from a three-year FIPSE grant, CPEC sponsored an intersegmental Invitational Conference on the Evaluation of Remedial Programs in Postsecondary Education. This conference was intended to assist all segments of higher education in California to develop a plan to reduce remedial activities in postsecondary education, a current educational issue with implications for research, evaluation, and public policy. CPEC's interest in remedial education was first publicized in its 1983 report, Promises to Keep, which called on all segments of higher education in California "to reduce remedial activities, in reading, writing, mathematics, and English as a Second Language within a five-year period to a level consonant with the principles of both quality and access as determined by each segment." In addition, each segment was to have prepared a plan for evaluation by March 1, 1984. We will now review CPEC's recommendation, consider arguments against CPEC's recommendation, and review the response of one segment, the University of California, to the recommendations for research, evaluation, and policy.

Promises to Keep

Recommendations

In Promises to Keep, the authors wisely write that remediation is not a "temporary phenomenon, but a permanent one" (p. 102). The entire paragraph is worth rereading.

Both segments [University of California (UC) and California State University (CSU)] have taken a positive step within the last year to reduce the number of underprepared students entering their doors by raising their admissions standards. Perhaps even more importantly, the segments' Academic Senates have agreed on their expectations for the high school courses required for admission. But until these changes take effect, and they cannot without concurrent reform in the high schools, the problem of remediation will remain at least as great as it is today. Whether or not the long-range approach of increased admissions standards, together with certain secondary school reform, proves successful in improving the preparation of students, intervening generations require continuing efforts to prevent wastage of human potential. Moreover, if institutions maintain their commitment to access, both to the educationally disadvantaged and to those wishing to reenter higher education after some appreciable interval, the need for remedial courses and services at the University of California and the California State University will continue in some measure and will never entirely disappear unless society reaches utopic levels. As pointed out in an earlier section to this report, history indicates that remediation is not a temporary phenomenon but a permanent one. Nonetheless, the four-year segments should continue their efforts to maintain collegiate standards and to influence student preparation at the secondary level with the ultimate goal of reducing the need for remedial offerings (pp. 101-102).

The ultimate goal, then, is to reduce "the need for remedial offerings".

A Plan

But, CPEC goes on to ask the UC and CSU to develop a plan by March 1, 1984 to reduce remedial activities within the next five years. The exact wording of that recommendation also bears rereading.

Recommendation 1. That the University of California and the California State University each develop by no later than March 1, 1984, a plan whose goal is to reduce remedial activities in reading, writing, mathematics, and English as a Second Language within a five-year period to a level consonant with the principles of both quality and

access as determined by each segment. In developing such plans, the segments should take into account the anticipated effects of increased admissions requirements and the steps taken by the high schools to improve students preparation. These plans shall be transmitted to the California Postsecondary Education Commission for review and comment (p. 102).

But, it appears that a plan to reduce remedial offerings is premature, given the continuing need for remedial offerings and the absence of any evidence that this need is waning.

Arguments Against A Reduction

National, State, and Local Problems

Nationally, our schools are receiving an F on their report card (Conrad, 1983). Beverly L. Anderson (1983), Director of the National Assessment of Educational Programs (NAEP) writes in the "Sorry State of U.S. Schooling" "The blunt truth is this: Our data shows that American students are making little or no progress on improving their thinking and problem-solving skills." Other recent national reports have noted the need for reform of the educational system, including "A Nation at Risk: The Imperative for Educational Reform," the report of the National Commission on Excellence in Education (1983), chaired by UC President Elect, David Gardner; the National Taskforce on Education for Economic Growth (1983); The College Board's "Academic Preparation for College: What Students Need to Know and Be Able to Do (1983);" and the Report of the Twentieth Century Fund Taskforce on Federal Elementary and Secondary Education Policy (1983).

The National Science Board's new Commission on Pre-College Education in Mathematics, Science, and Technology notes that, among other problems, "in 1981 half of the teachers newly employed nationwide to teach secondary science and mathematics were uncertified to do so." Further, 25% of the experienced secondary science and mathematics teachers expect to leave teaching in the near future" (American Council on Education, 1982). A crisis in mathematics instruction in the secondary schools is reported. In a National Academy of Sciences 1982 report "Science and Mathematics in the Schools" the authors contend that a 20-year erosion of mathematics and science education has contributed to the effects observed today.

Though much emphasis has been placed on declining science and mathematics skills, a recent survey by The Chronicle of Higher Education (Watkins, 1983) found inadequate preparation in reading, writing, humanities, and social science as well.

About 60 percent of the colleges and universities participating in the survey reported no change from the previous year in the reading, writing, and mathematical abilities--already widely conceded to be inadequate--of the new students coming to their campuses for the

1981-1982 academic year. Between 25 and 30 percent of the institutions said the academic skills of their freshmen and transfer students had actually decreased from the previous year. About 10 percent said the skills of these students had increased.

About two-thirds of the institutions reported that there was no change in the new students' level of knowledge in science, the humanities or social studies. Roughly one-fifth of the colleges found that their students had less grounding in these disciplines than did the new students in the previous year.

In California, reports have also been prepared, including the report by the California Roundtable on Educational Opportunity (1983), CPEC's Promises to Keep (1983), the Little Hoover Commission (1983) report, and the UC's own report of March, 1981 "Report to the Policy Committee on the University of California's Activities to Assist Underprepared Students."

Underpreparation of UC students is both a campus and Systemwide concern. The first three issues of UC's Student Preparation Quarterly (1982, 1983a, 1983b) include descriptions of campus programs and intersegmental activities such as the California Mathematics Project, CSU's plan to improve teacher education, Early Outreach Programs and Futures, a new booklet for eighth graders. The Student Preparation Coordinating Committee was formed to assist with the identification of on-going activities and the development of a central collection of research findings and other documents which could be useful to the campuses involved with programs to upgrade the schools.

All of which is to say that, nationally, statewide, and within the University of California there is a recognition that primary and secondary education inadequately prepares students. There is little evidence anywhere of improvement in the level of preparation; instead, there is evidence of continued decline. Some find hope or consolation in the possible effect on secondary education of a change in college admissions requirements. In fact, CPEC asks the University to "take into account the anticipated effects of increased admissions requirements" (p. 102). However, increased admissions requirements will have little effect on actual student skill level for students entering UC. The Affirmative Action Subcommittee recently made a similar observation in its report to the Chancellor of the UC San Diego campus (1983).

Increasing the stringency of admission requirements to the University seems unlikely to decrease the necessity for tutorial programs. The problem is that many underrepresented students, even those regularly admissible to UC, graduate from high school poorly prepared for university-level work. This poor preparation is the result of poor education beginning in elementary school. Fulfillment of additional high school requirements is not necessarily going to produce better prepared students since the content of the school curriculum may need upgrading, and teachers responsible for the academic courses may also need additional training. Such students experience an enormous sense of defeat when confronted with the demands of our undergraduate instruction.

Most of the remedial needs (the word is used as defined by CPEC) occurring in the University of California occur among those students who are presently regularly admissible and in the top 12.5% of their high school classes. One more year of mathematics or English is not going to make that much difference. Further, several studies indicate approximately 90% of the regularly admitted students already have met the new requirements. So, full-scale changes in the level of student preparation are not going to result from changed admissions requirements.

It is important to remember that only about 6% of the students who graduate from high school go on to the University of California. Thus, secondary schools have a whole set of priorities, concerns, and constituencies that are unrelated to the UC's narrow interest in the level of preparation of our students. It seems, then, that the concern for the \$5 to \$6 million UC reportedly spends on remediation is misplaced. An educational reform package of \$800 million has been included in the 1983-84 budget, but to restore the sixth period to the 11th and 12th grades in Los Angeles, it would cost \$12 to \$13 million. This is a "step that must be taken if the district is to abide by the California Board of Education's suggested new high school graduation requirements" (Trombley, 1983b). Simply lengthening the school day by one period in a major district costs twice what it takes to provide remedial services in the University of California. Do we really expect to see the influx of funds necessary to upgrade all of K-12 such that the level of UC students rises to our ideal?

Furthermore, increased funding is not enough. In discussing the report of the National Commission on Excellence, an article in the Wall Street Journal (Royster, 1983) includes the following view.

What needs examining is not the Commission's diagnosis but its proposed remedy. While any cure will require money, it won't come just from increasing school budgets. Higher salaries for teachers would attract better ones. That won't improve the skills of those already in the classrooms, many of whom as the Commission concedes, "are drawn from the bottom quarter of graduating college students." Lengthening the school year would be pointless if it just means more of the same.

Thus, the University of California should develop a plan, but not a plan to reduce remedial activities. Instead, UC should develop a plan to provide the instruction and academic support services necessary to the students admitted to the University. Secondly, UC should realistically assess community college instruction, particularly for students intending to transfer and as an alternative to UC providing remedial instruction for UC students. Thirdly, the University should provide leadership and assistance to a movement to substantially improve the K-12 educational system in its entirety, without excessive self-interest and emphasis on the students who come to the University of California.

Primary and Secondary Education

Oversimplifying the issues confronting the primary and secondary schools will cause attempts to improve education to be ill-conceived and ineffective, which is apparent following a careful look at four areas of concern: equity, teaching, instructional materials and time, and funding. Following this discussion, the community colleges and their role in preparing UC students will be examined. Lastly, suggestions will be made about what the University of California's position should be on the issue of remediation. Hopefully these observations and arguments support the decision to refrain from any attempt to reduce remedial activities at present.

Equity. The commitment to equal educational opportunity must be strengthened while we, at the same time, assist with the improvement of the schools and student performance. Further, we must be wary of those who would create a false dichotomy and pit excellence and standards against equity and access.

The Twentieth Century Fund Task Force on Federal Elementary and Secondary Education Policy (1983) argues that the federal government's emphasis on promoting equality of opportunity in the public schools has meant a slighting of its commitment to educational quality. This is an unnecessary and provocative statement that turns attention from the important issue which the Task Force itself discusses in its next paragraph.

Despite all its shortcomings, however, there is a need for a continued federal role, in part because equality and excellence are not mutually exclusive objectives. We think both objectives should be vigorously pursued through a fresh approach, one that reflects the national concern for a better-educated America and that strikes a balance between quality and equality. The federal government must continue to help meet the special needs of poor and minority students while taking the lead in meeting the general and overwhelming need for educational quality.

"A Nation at Risk" says it even better.

The people of the United States need to know that individuals in our society who do not possess the levels of skill, literacy, and training essential to this new era will be effectively disenfranchised, not simply from the material rewards that accompany competent performance, but also from the chance to participate fully in our national life. A high level of shared education is essential to a free, democratic society and to the fostering of a common culture, especially in a country that prides itself on pluralism and individual freedom. (National Commission on Excellence in Education, 1983)

Stephen Weiner, Provost, Mills College, says it best.

The second neglected issue concerns the impact of contemplated reforms upon poor and minority children in California. Many people have said, I among them, that higher standards for student performance will benefit all children. But there is grave danger in smugly dismissing the anxiety over the effects of new expectations upon children of poverty and children of color with this well intentioned assurance. What students learn and the aspirations they embrace depend upon a fiercely complex web of circumstances having to do with the culture of their home and their peer group as well as the relationship between school and community and teacher and student. Can we say with confidence that we have mastered, for example, the exquisitely difficult challenge of educating Hispanic children (especially those with limited or non-existent skills in the English

language)? Such confidence is not warranted, for not only do we not have the requisite personnel or teaching strategies, but we lack an intelligent and reasoned discussion of the issues. Let us be frank--we have abandoned conscious efforts to integrate our schools. What strategy have we to replace it? (Weiner, 1983).

What, indeed, do we have to replace the idea that integrated schools, even if we were to achieve them, would lead to improved student performance? The low performance of low-income students and certain minority groups continues. Scholarly articles abound. The daily newspapers report specifics about the local community. Recently, the San Diego Union (Calvin, 1983) printed data from a report of the San Diego Unified School District:

The report shows that only 10 percent of the Black seniors and 17 percent of the Hispanics in the San Diego Unified School District had grade averages above "B" when they started the 12th grade last fall.

By comparison, 32 percent of the White and 42 percent of the Asian 12th graders had better than "B" averages, according to the figures.

The study also showed that 44 percent of the Blacks and 38 percent of the Hispanic students had less than a C average, while only 20 percent of the Whites and 14 percent of the Asians had grades below that level.

Last fall the College Board issued its first report on the "educational deficit" for minority students, which is well illustrated by the median SAT score differences for blacks and whites. Blacks' median verbal score was 332 compared with 442 for white students, and their median math score was 362 compared with 483 for white students. ("Profiles, College Bound Seniors 1981" provides data by major ethnic groups but no summary comparison tables exist).

A recent Los Angeles Times (Montemayor, 1983c) article asked why so many Latino students fail. The excerpt below is instructive.

Latino children too often seem destined to fail from the first day they enter school. Here is a brief primer on the situation:

The students--Latinos make up 25% of public school enrollment statewide, and 49% of enrollment in Los Angeles city schools.

The state Department of Education reports that of the 1,045,000 Latino students statewide, about 23% are performing satisfactorily--at or near grade level. Another 31% are not proficient in English and are considered below grade level until they acquire English. Most of these are in bilingual programs. The remaining 46% are

classified as English speakers but their achievement is unsatisfactory--below grade level. Robert A. Cervantes, an administrator with the state Office of Migrant Education, said youngsters in this group account for much of the high Latino dropout rate.

Dropout rate--The State Department of Education calculates the Latino dropout rate in secondary schools at 45% over the last 12 years.

Cervantes estimated that, on average, 39,195 Latino students have dropped out each year during that period. That, he added, is more than the total number of Latinos who graduated from California high schools last year--38,698.

"The waste of human potential is self-evident," Cervantes said.

Achievement--State Department of Education studies show that, in general, Latino students repeat grades at twice the rate of Anglo students. Twice as many Latinos read below their grade level, compared to Anglo students.

Expectations--On the learning potential of Latino students, John Goodlad, Dean of the Graduate School of Education at UCLA, declared: "I think there is a growing acceptance of Hispanics being able to learn. But for too long, they have been kept in lower (academic) tracks where the subject matter taught to them was not sufficient to prepare them for college or science and high technology. The same idea existed for black children, and they're very capable of learning. We have to overcome this idea that Hispanic children can't learn.

Yet, the Los Angeles Times (Savage, 1983b) also describes the outstanding achievement of one committed calculus teacher in an East Los Angeles school enrolling primarily Latino students. The teacher is described as "a Bolivian immigrant who has become a one-person academic booster team in East Los Angeles." It was Jaime Escalante's students, 18 of them, who did so well on the advanced placement calculus test that ETS questioned the scores of 14 of them. On 24 hours notice 12 of the students (2 were out of town) retook the test under ETS supervision and all 12 passed again. As the Times observed, "the event became a cause célèbre in the Latino community, because many Latinos suspected the inquiry arose merely because of the students' background." (See Attachments 16 and 17).

I would hope it would become a cause célèbre in educational circles because it so clearly shows the effect of good teaching on what seems to be an intransigent educational problem. Clearly, good teaching can have an effect, in some cases an astonishing effect, on the performance of students, but good teaching is no more prevalent in our schools than equal opportunity.

Teaching. In "A Nation at Risk" the section on teaching states that "not enough of the academically able students are being attracted to teaching; that teacher-preparation programs need substantial improvement; that the professional working life of teachers is on the whole unacceptable; and that a serious shortage

of teachers exists in key fields." The Commission then makes six points:

Too many teachers are being drawn from the bottom quarter of graduating high-school and college students.

The teacher-preparation curriculum is weighed heavily with courses in "educational methods" at the expense of courses in subjects to be taught. A survey of 1,350 institutions training teachers indicated that 41 percent of the time of elementary-school-teacher candidates is spent in education courses which reduces the amount of time available for subject-matter courses.

The average salary after 12 years of teaching is only \$17,000 per year, and many teachers are required to supplement their income with part-time and summer employment. In addition, individual teachers have little influence in such critical professional decisions as, for example, textbook selection.

Despite widespread publicity about an overpopulation of teachers, severe shortages of certain kinds of teachers exist: in the fields of mathematics, science, and foreign languages; and among specialists in education for gifted and talented, language minority, and handicapped students.

The shortage of teachers in mathematics and science is particularly severe. A 1981 survey of 45 states revealed shortages of mathematics teachers in 43 states, critical shortages of earth-sciences teachers in 33 states, and of physics teachers everywhere.

Half of the newly employed mathematics, science and English teachers are not qualified to teach these subjects; fewer than one-third of U.S. high schools offer physics taught by qualified teachers. (National Commission on Excellence in Education, 1983)

These teachers will still be in the classroom this fall when school opens. What really will be different for the UC's freshman class of 1987 which starts ninth grade this fall?

John I. Goodlad, Dean of the Graduate School of Education at UCLA, says that the wave of reform "must begin with local school teachers and bring changes in curricular and teaching practices" (Watkins, 1983a). In a recent article on San Diego State University's College of Education, an unidentified faculty member describes the education students as "Dumber than a box of rocks." Lanie Jones, (1983a), Education Writer of the Los Angeles Times, goes on to soften the effect of this remark.

Though an obvious overstatement, his comment illustrated the depth of scorn--education professors call it bias--that much of the campus feels toward its once-admired teacher training college.

The bias or scorn is not limited to SDSU. It pervades the University of California as well with our well-known disdain for teacher preparation programs.

A recent report of teacher test results states that "students from the University of California (UC) are passing the new California Basic Educational Skills Test in far greater numbers than students from other institutions." Of those who attended UC for major field course work or received a bachelor's degree 81% passed the test. However, "students from California's independent institutions, the California State University and colleges outside the state did not do nearly as well. In fact, only 59% of students attending a CSU campus passed." It is all well and good that the UC takes pride in its relatively higher score, but it is important to realize that only 12-14% of these teachers were educated at the University of California, compared with 15-18% from outside the state, and 54-56% from the CSU system (Commission on Teacher Credentialing, 1983).

Thus, when we at UC talk about the ways we can help improve the level of preparation of the students we receive, we might give more serious consideration, and respect, to programs that prepare the teachers who will work with our future students. SDSU is revising its teacher training program (Jones, 1983a). However major changes will be required to respond to the six points noted by the Commission on Excellence. And, not only will we have to do more to recruit highly talented people to be teachers, we'll have to do more to keep them. The Wall Street Journal (Chase, 1983) recently printed "Schoolhouse Blues: California's Teachers, Once Among the Best, Slump in Competency." The score results were mentioned:

This year, California school administrators turned the tables on about a thousand of the state's schoolteachers, giving them a test to assess their skills in reading, writing, and 'rithmetic.

Nearly half flunked.

Vivid writing from the Wall Street Journal, which goes on to say:

Clearly, the teaching profession in California and the rest of the U.S. is suffering from an acute case of brain drain. Arresting it is probably the essential first step in improving a public-school system so bad that the recent report of the National Commission on Excellence in Education condemned it as "putting the nation at risk."

Without better teachers, most of the Commission's suggested reforms--more spending, better curriculum, longer school terms--will accomplish little. But California's case shows that the quality of instruction has sunk to unexpected depths, and prospects for a turnaround, while not hopeless, are pretty dim, indeed.

Thus, it seems that an important role for UC will be in teacher preparation, through expansion of current campus programs, addition of new ones, and in in-service training programs like the California Math Project and the various Writing Projects. If institutional quality has an effect on students, as we all presume, and if UC-educated students outperform others, it seems reasonable to suggest that we expand our teacher training. (We may also want to study further the 19% from UC who did not pass, just to maintain humility. Stanford's rate was 97% (Savage & Jones, 1983).

In May, 1982, the Chronicle of Higher Education (McDonald) discussed a study reporting that in 1980, "half of the secondary school teachers employed for the first time to teach science and mathematics were unqualified to teach those subjects. Fifty-one percent of the elementary-school teachers said their undergraduate training had not prepared them to teach the science courses they were required to give." We need to remember, these teachers are coming back to school this fall, too.

Instructional time and materials. In addition to their comments on teaching and teachers, the authors of "A Nation at Risk" observe that "too few experienced teachers are involved in writing textbooks" and that many texts are being "written down" by their publishers to "ever-lower reading levels in response to perceived market demands." It is no surprise then that "a majority of students were able to master 80 percent of the material in some of their subject-matter texts before they had even opened the book." The authors also note:

Expenditures for textbooks and other instructional materials have declined by 30 percent over the past 17 years. While some recommend a level of spending on texts of between 5 and 10 percent of the operating costs of schools, the budgets for basal texts and related materials have been dropping during the past decade and a half to only 0.7 percent today. (National Commission on Excellence in Education, 1983)

The condition of our textbooks is further illustrated by another recent Los Angeles Times article (Trombley, 1983c) noting that increases in the size of the state Instructional Materials Fund would allow school districts to "get rid of aging history social science texts, some of which show only 48 stars in the UC flag or describe the political divisions of Africa as they existed in 1910." Francie Alexander, manager of the textbook division in the State Department of Education, stated "Some of the books now in use stop at 1963. For kids who were born in 1973, that's already another era." Approximately \$76 million is required to provide full state funding for books for kindergarten through eighth grade.

Instructional time is as inadequate as instructional materials. Every statement from "A Nation at Risk" about use of time is worth a careful reading.

Evidence presented to the Commission demonstrates three disturbing facts about the use that American schools and students make of time: (1) compared to other nations, American students spend much less time on school work; (2) time spent in the classroom and on homework is often used ineffectively; and (3) schools are not doing enough to help students develop either the study skills required to use time well or the willingness to spend more time on school work.

In England and other industrialized countries, it is not unusual for academic high school students to spend eight hours a day at school, 220 days per year. In the United States, by contrast, the typical school day lasts six hours and the school year is 180 days.

In many schools, the time spent learning how to cook and drive counts as much toward a high school diploma as the time spent studying mathematics, English, chemistry, U.S. history, or biology.

A study of the school week in the United States found that some schools provided students only 17 hours of academic instruction during the week, and the average school provided about 22.

A California study of individual classrooms found that because of poor management of classroom time, some elementary students received only one-fifth of the instruction others received in reading comprehension.

In most schools, the teaching of study skills is haphazard and unplanned. Consequently, many students complete high school and enter college without disciplined and systematic study habits. (National Commission on Excellence in Education, 1983)

Given all this, do we really think we should be spending our time developing a plan to reduce remedial activities? Do we really believe that a large number of students suddenly will score above 600 on the English Composition Test, which UC uses as a preliminary screening tool to assess entering students' writing competency, when 80.6% presently score below? (University of California, San Diego, 1983). Do we seriously think that the students who start Algebra I in ninth grade this fall are going to receive significantly better instruction in mathematics, such that little or no remedial or pre-calculus instruction will be required when they are freshmen in September, 1987? And, even if they do take the required three years of mathematics, meeting the new UC admissions requirements, they still will not have taken trigonometry. Will these students be ready for calculus?

Teachers, textbooks, and time are interrelated with homework as well. Recently the Los Angeles Times (Montemayor, 1983a & b) reported on a new homework policy for the 110,000 students in the San Diego City Schools, the nation's eighth largest school system. Assignments will range from a few minutes for elementary school students to two or more hours per day for high school students. Yet Robert Matthews, Director of Education in the elementary division, expects some resistance.

Matthews said some teachers will react unfavorably because the new policy may require additional paperwork. "And a lot of teachers also don't like to be told by administrators how they're supposed to be teaching," he said.

"Homework is just as American as apple pie, but not everyone likes apple pie," Matthews said. "But homework, throughout the years, has always been a controversial area. Many people feel that the job of teaching should be done completely within the classroom. After all, parents are paying for things to be done at school."

So much for translating the new rhetoric of educational reform into action. Here is one concrete step and already resistance is evident, and predictable, and understandable. Given that climate, and the realistic pace at which change will occur, what will, in fact, be different for the Fall Quarter, 1987, freshman class?

Funding. Money is the common denominator for many, though not all, of the changes necessary in the schools--increased money for textbooks, increased salaries for increased instructional time, increased pay scales to draw and keep talented teachers.

Recently the Los Angeles Times (1983) reported that "about 60% of educators trained to teach high school mathematics leave the classroom because of low pay. The Wall Street Journal (Chase, 1983) quotes Claire Pelton, an English teacher and advisor to the Educational Testing Service, "The teaching profession hasn't attracted the best and the brightest for several years. Education was always a low-paying profession, but now it suffers from low esteem as well." Teachers believe they are taken advantage of and have a morale problem, the article continues. A high school history teacher is quoted: "Industry doesn't expect to get good engineers for nothing. But schools expect to pay nothing and get some dedicated sucker."

The Wall Street Journal (Chase, 1983) goes on to focus on California's funding.

Addressing a public hunger for a return to scholastic rigor, Mr. Honig found voter support for his plan to restore graduation requirements, lengthen the school day and year, tighten student discipline and raise beginning teachers' pay over three years to \$19,000 from \$13,500. He would also flout tradition by giving enterprising teachers extra pay and by ousting unfit teachers.

The cost would add nearly \$1 billion to California's basic \$13 billion education budget, but Mr. Honig argues the investment must be made. "We've systematically underfunded education in this state," he says. "We're spending almost \$350 less per child than the U.S. average--\$2,160 versus \$2,500. As a high-technology state, we should be spending \$500 more."

Education has been underprovided as well as underfunded. Recently, in the Los Angeles Times, Assemblyman Pat Nolan (1983) writes "our students are also hurt by California's shorter instructional day and year. A student graduating from high school here has actually spent 293 fewer days in the classroom than has the average student in other states." Clearly, adding 293 days to work our way up to average is going to cost money.

Nolan's editorial is entitled "Schools Can Thrive Without Higher Taxes," by which he does not mean without increased allocations. He would just take the money from somewhere else, faulting "Brown's misplaced budget priorities" and noting that "California now ranks first among states in per-capital welfare spending but 35th in the amount spent per public-school student."

Our exact ranking and our expenditures per pupil are not consistently reported. In an article in the Los Angeles Times entitled "Public School Decline Predates Prop. 13 Vote," David Savage (1983a) writes:

How poor are California's public schools compared with those of other states? They do not rank 50th and never have. In its most recent rankings, the National Education Assn. said California stood in 31st place among the states in its "current expenditures for public elementary and secondary schools per pupil." In the 1982-83 school year, California's schools spent an estimated \$2,727 in total per child, significantly below the national average of \$2,952.

Perhaps the rumored 50th rank resulted from a different way of looking at support for education.

In September, 1982, the California Department of Education, using incomplete numbers, estimated that the state had fallen to 50th place among the 51 jurisdictions of states and the District of Columbia in the percentage of its personal income devoted to the public schools. In fact, the education association said last month that California actually ranked 44th. This state spends an estimated 3.72% of its personal income on public education, kindergarten to 12th grade, as compared to a national average of 4.20%.

Whatever the exact ranking and figures, Gerald Kissler (Savage, 1983a) sums up:

"There has been a long and dramatic drop. It began well before Proposition 13, but it has been even sharper since then," said Gerald Kissler, vice provost for planning at UCLA, who has examined California's school financing. "We were once considered a leader in public education, but we're certainly not anymore."

What is the history of this decline?

The popular notion is that Proposition 13 devastated public education in California after 1978.

It is not so.

In fact, California's level of spending for public schools has been sinking for decades. Moreover, the most recent money crunch has as much to do with declining enrollments, the state Supreme Court Serrano ruling and the severe recession as it does with Proposition 13.

But whatever the cause, school spending has gone down so long and so far that the programs and services once considered a vital and necessary part of an education for previous generations of California children are now fast disappearing. . . .

But the story of the tax revolt's effect on the schools is not one of sudden, devastating and disastrous spending cuts. Rather, it is one of years of squeezing, trimming and cutting corners: dropping elective classes ranging from dance to calculus; eliminating summer school for all but remedial students; not replacing worn-out typewriters or lab equipment; laying off counselors, nurses and attendance officers; deferring the maintenance and repair of school buildings; holding on to outdated textbooks, and holding down the pay of teachers and principals. . . .

Whether the schools are in an affluent neighborhood such as San Marino or Palos Verdes or a more working-class community such as Montebello or Paramount, school officials can quickly tick off a long and nearly identical list of cutbacks. . . .

About 60% of the districts in the Times survey said they had reduced their spending on books, and 44% had cut back the number of librarians. . . .

In the Times survey of school districts, 74% said they had reduced their staffs of counselors, nurses and psychologists.

Some districts have eliminated counselors.

"We still have them. But our ratio is 480 students per counselor. Can you imagine trying to advise, even learn the names of, 480 kids?" asked Hugh Cameron, superintendent of the South Bay High School District.

We must remember that these are the counselors we count on to explain the UC admissions requirements and distinguish among UCSD's four colleges.

But as Hugh Cameron, superintendent of the South Bay Union High School District in Redondo Beach, noted: "You could drive by here every day and things would look pretty much the same. The kids still go to school for 175 days and leave here and go on to do well in college or in a job. But if you're here, you know how much it is changed. Education is a service industry, and we just can't offer the same level and quality of service we once did."

While the decline in service is evident, it is less clear how much Proposition 13 is to blame. School enrollments have generally declined for the last decade, and state funds for local schools are sent out on the basis of the number of students.

"If you had six children in your house and one graduated and left home, your costs wouldn't go down by one-sixth," said James Pierchala, financial analyst for the Los Angeles County Schools Office, but if you were a school district, your funds would decline by one-sixth. Besides the fixed costs of keeping open the buildings, schools must lay off the least-senior and lowest-paid teachers when enrollments fall, leaving behind a higher-cost work force.

That higher-cost work force may account, in part, for one of two areas California ranks near the top--teacher salaries and class size.

California does rank near the top of several education association charts--on average teacher salaries and in class sizes. In 1982-83, the state's teachers had an average salary of \$23,935, sixth-best among the states. The national average was \$20,603, according to the association. This rank has changed little, since California teachers ranked fifth in 1977-78 in their average salary.

But that advantage is somewhat nullified by the fact that the state has the second-highest pupil-teacher ratio. In 1982, California had 23.1 children per teacher, well above the national average of 17.1. Only Utah had a higher ratio. Almost all classes are larger than this and typically include from 28 to 32 children. But special teachers--for example, those serving handicapped children or a music teacher who moves among several classes and schools--bring down the ratio.

Although teachers' salaries have inched upward in the last decade, their purchasing power is down 16% from 1974, according to figures compiled by the legislative analyst and Cal-Tax.

Superintendent Gary Olson, Vista Unified School District (Savage, 1983a), underscores the importance of improving teacher salaries.

The most serious and far-reaching effect of Proposition 13, Olson contends, is the inability of local school districts to pay salaries high enough to attract and retain good teachers.

"We're looking down the barrel of a tremendous teacher shortage," Olson said. "Education has been a real undesirable profession to go into for a lot of reasons. It's a gradual erosion. That's what we're seeing, and that's what we're going to continue to see. I think that's going to be the single largest impact of all of this."

Bloom agreed, saying his own decision to become a teacher 10 years ago might have been different had he known that support for public education in California would sink as low as it has.

For now, Bloom said, the teachers will use what funding there is "to keep education functioning at a level to turn out the students the public wants to turn out. I'm not saying we're not doing the job, but we're doing it with the bare minimum. At this point in time, it can't get any worse. It's got to get better."

A move to increase teacher salaries is certainly gaining increased support, yet differential salary levels, based on merit, are controversial. Superintendent Honig, President Reagan and others seem to favor merit pay increases but many are opposed and their arguments are worth a hearing (Elliott-Thomas, 1983). Lewis Lapham (1983), columnist and former editor of Harpers, argues in "Let's Pay Teachers on Merit--When Others Get the Same" that "income does not express individual merit or value added to the society; if it did the ranks of the unemployed would be terrible to behold." As examples he notes "Dave Winfield's being paid \$1.5 million a year for a batting average of .250, doctors who charge princely fees for misdiagnoses and bungled operations, university professors who are promoted for publishing unintelligible prose."

Lapham goes on to say, "not only is it treasonous to correlate merit with cash, but also it is impractical. Just how would the scheme work? Who would decide what constituted merit?" Possible methods are listed below, along with Lapham's summary judgment.

If the students' grades were made the criterion for a teacher's skills, then who would assign which teachers to the brighter students and the easier courses of study? If it were left to the students to rate their teachers, then what teacher could afford not to distribute test scores as if they were political spoils? Were the judgment given to the parents, then what teacher could ignore the pressure of special interests? Last month, in a New York public school, a teacher made the mistake of reprimanding a student who was possessed of a criminal record. The boy's mother walked into the classroom the next morning and beat the teacher with a bicycle chain.

Given the practices of the real world as opposed to the theories of utopia, the awarding of merit would fall to the boards of education, to the principals, to committees of senior faculty members. Within a matter of hours it would become obvious that the judgments were being made under the rules of patronage. Before the end of the term a system of grace and favor would endow students and faculty members alike with the gift of cynicism.

If people mean what they say about the quality of education, then there's nothing for it except to raise the levels of pay and status for the whole of the teaching profession. Such a measure might reward waste, fraud and incompetence, but so does every other distribution of public or private funds. It is a question of what society thinks important enough, for what values it stands willing to pay the surcharge that is exacted by its belief in the sanctity of profit. If it comes to pass that society thinks teachers as useful as doctors and lawyers, then it will have answered its own question.

Whether we agree with Lapham or not, he provides one more example of the complexity of the problems facing California's educational system--in funding, improvement of instruction, teacher preparation, and equity. We have a very long way to go before the paltry \$5 to \$6 million UC spends on remedial education can be reduced.

Community Colleges

Now, we will turn, briefly, to the idea that the community colleges can somehow provide a solution to the problem of underprepared students at UC. In 1980, the "Report of the Task Group on Retention and Transfer," chaired by Gerald Kissler, was distributed by UC's Office of the Academic Vice President. The following excerpts were taken from the report with the original authors' underlining. These observations are useful to us as we consider the community college role.

Between 1972 and 1978, . . . the number of regularly admissible community college transfers in the fall quarter with enough units to be classified as a junior declined by 30%.

The latest figures indicated that of 1.1 million students enrolled for credit in the Community Colleges, less than 60,000 transferred to a CSUC or UC campus. Evidence to be presented later in this report suggests that this trend toward fewer transfers is the result of declining enrollment in community college transfer programs and the large growth of vocational programs.

In contrast to the freshmen, graduation rates for transfer students have been declining, particularly for community college transfers. . . .

The decline in the three-year graduation rates for community college transfers is a function of longer times-to-degree and rising attrition. As with freshmen entrants, more transfers

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are taking longer to complete the baccalaureate. It is of some concern that more students are taking 3 or 4 years at the University before completing the baccalaureate, considering that these figures are based only on students who had enough transferable units to be fully classified as juniors by the University. . . .

We should point out that data collected for the Master Plan Survey Team (Spindt, Prator, Sanders, Peterson and Jensen, 1961) indicated that UC graduation rates for community college transfers in 1953 were similar to the rates we found for students who entered in 1975. However, that 1953 data led the Master Plan Survey Team (1980) to recommend that the UC admission requirement for transfer students, which was 2.4 at that time, be raised.

Consistent with declining graduation rates, overall attrition rates for transfer students have increased for all campuses except San Diego, which has one of the highest attrition rates.

Over the five-year period between 1972 and 1976 the overall attrition rates for community college transfers have increased at most campuses, with increasing attrition in academic difficulty at Irvine, Los Angeles, and Santa Cruz. Approximately 3 of 10 students who transfer to the University of California from a community college leave within the first year; and almost one-half of those will leave in academic difficulty.

The decline in academic performance that leads to rising attrition in academic difficulty is particularly noticeable for transfers at the lower end of the eligibility spectrum (i.e., community college GPA's between 2.4 and 2.8). As shown in Table 9, an increasing percentage of students with marginal grades in community college courses are encountering academic difficulties after transferring to the University of California. Over the five years covered in this study, the percent of students transferring from a community college with a GPA between 2.4 and 2.8 who were on probation at some time during the first year rose from 41% to 68%. This is a matter of some concern because one of every five regularly admissible community college transfers has a GPA between 2.4 and 2.8.

The published literature and other institutional studies suggest that the following factors are associated with a lower probability of graduating: poor previous academic performance, regardless of standardized test scores; low test scores, especially when coupled with weak academic performance; lack of a defined educational or career goal; and lack of involvement with the campus which may be related to working off-campus, living off-campus or trying to work more than 20 hours per week. We analyzed the data for five of the eight campuses whose data were available in a consistent format, to determine if any of the variables in our student

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record files would be good predictors of attrition in academic difficulty of UC GPA's. Our findings were consistent with many other institutional studies. While there was a tendency for preadmission GPA's to be related to academic performance at the University, the background variables in our student record files were not good predictors of attrition in academic difficulty.

Thus, we have a decline in the percentage of students transferring, a decline in the graduation rates of those who do transfer, an increase in overall attrition rates and attrition rates of those in academic difficulty, differential attrition for those in the 2.4 - 2.8 GPA range, and an inability to identify preadmission predictors of academic difficulty which would allow us to better advise students and the community colleges about what factors contribute to a successful transfer experience.

But there is more in this excellent study, which is excerpted below.

While our data did not permit us to determine the reasons for increasing academic difficulties, the findings of several other studies have shed some light on several possible factors: 1) inadequate preparation in some transfer courses, 2) faculty contact, 3) "transfer shock," and 4) eligibility for admission from high school. For example, a review of the records for students who were dismissed from one of our campuses indicates that frequently they were given credit for having completed lower division course work at a community college but were not adequately prepared for the the University's upper division courses, particularly in the sciences. Another study (Lara, 1980) indicates that courses in the Community Colleges are less likely to require higher level cognitive activities of students. Using the Quality of Student Effort Scales, community college transfers were asked to indicate how frequently they had completed certain tasks, as a Community College student and as a University of California student. Approximately two-thirds of the transfers said they had frequently or very frequently "worked on a paper, project, or assignment where they had to integrate ideas from various parts of the course" while at the University. Only one-third of the transfers said they had done this frequently or very frequently for Community College courses. Similar results were obtained when students were asked if they had "summarized major points and information in your readings or notes," or "spent at least five hours writing a paper."

In the Discussion and Recommendations section, the Task Group notes "a fundamental change in California's tripartite system of higher education over the past 30 years." The comments below seem most pertinent.

Consistent with the fact that community college transfer programs have become smaller is the tendency for more high school students to choose the University of California. In 1975 23% of the high school graduates who were eligible for admission to the University of California chose to go to a community college. The data from our Student Choice Task Group indicate that the percentage of UC eligible high school students who say their first choice is to attend a community college is now only 15%. So, more students want to come to the University of California directly from high school rather than through the community college transfer route. Because fewer students have been transferring from the Community Colleges, both CSUC and UC have the capacity to admit these students directly from high school.

Unfortunately, this may have a further downward spiraling effect on the size and nature of transfer programs in the Community Colleges. As fewer UC and CSUC eligible high school students enter the Community Colleges, the most academically able students are removed from the transfer classes. This lowers the level of competition in the classroom, lowers the level of text that can be used and the amount of material that can be covered, and lowers the norm for grading purposes. Because the decline in academic performance of community college transfers occurred during the early 1970's (c.f., Tables 5, 8, and 9), several years before UC and CSUC began admitting more of the eligible students directly from high school, we might expect the performance of community college transfers to decline even further in the next few years.

For all practical purposes, if we continue on the present downward spiral, many Community Colleges campuses will not articulate with UC campuses because they will not be able to afford to offer the vocational and community service programs to their students as well as the breadth and quality of program that will prepare students for the University of California. And, we are clearly headed in that direction. In 1978, 20 out of 72 Community College districts sent fewer than 20 students to the UC system.

Further restriction of the flow of well-qualified students from the community Colleges to the University would have several serious implications:

1. It would change the very nature of the Community Colleges, with a deleterious effect on faculty morale.
2. It would result in more of our students entering directly from high school with a consequent demand for lower division courses that we do not have the resources to provide.
3. It would restrict the options available to students in these districts--students who most likely will come from educationally and financially disadvantaged backgrounds.

And yet, we cannot afford to ignore the realities of what Lombardi (1979) calls "the decline of transfer education."

One might argue that at least a portion of these differences can be attributed to the fact that the upper division courses at the University are more likely to require these higher-level cognitive activities. However, the data from another study (Pace and Friedlander, 1979) indicate that these activities are required in both lower division and upper division courses at the University and that similar differences are found when lower division University students are compared with Community College students.

Since only 5.5% (60,000/1,100,000) of the students in the Community College are transferring to UC or CSU, is it not reasonable to think that the type of instruction these students receive in their first two years is significantly different from the instruction received by a freshman or sophomore who began at UC? No articulation agreement is going to change the fact that the majority of students in any given class, even a class designed to meet general education requirements, will be unlike those enrolled in a similar course at the UC. The report notes implications of this for level of instruction, complexity of assignments and tasks, teacher expectations, and the curve used for grades. Often upper-division faculty fault lower-division faculty in their own institution for inadequate preparation of students. Even more find fault with preparation provided by other UCs for inter-campus transfers, and with CSU courses. Is this reduced level of preparation any less true for community college courses?

Given the above, it is not clear how we can look to the community colleges, increasingly beleaguered since this 1980 report, to provide the solution to remedial instruction for UC students. (Trombley, 1983a). That is not to say that experimental programs, such as UCSD and SDSU's agreements with local community colleges to provide certain courses, are not worth undertaking. (Jones, 1983b, Manaster, 1983, Thesken, 1983). It is to say that the current record for community college transfers gives no evidence that these institutions can provide a solution to underpreparation of UC students. To argue that they provide instruction less expensively is not pertinent. It isn't less expensive if it doesn't work.

University of California

Primary and secondary education has been discussed at length. My remarks about the role of the community college were less extensive, due to the excellent report on "Transfer and Retention." My views on the University of California's role can be stated even more succinctly. The University of California should develop a plan to provide the instruction and academic support services necessary to the students we admit to the University of California.

I believe it is clear that we cannot expect major changes in the preparation level of students for a long while, if ever. And, to the extent SAT scores document skill level, UC students' skills have declined substantially. A recent article in the Los Angeles Times, (Roark, 1983), entitled "UC: No. 1 in the U.S., but Can It Last?", included this data.

Although the qualifications of UC's entering students, as measured by the Scholastic Aptitude Test, are still above average, their scores have been dropping more dramatically than those of many other universities' students.

Data gathered by the UC central administration shows that national SAT verbal scores dropped from 466 in 1968 to 424 in 1980. The drop at UC, from 561 to 495, was 50% greater than the national average.

Education officials in California do not agree on what, if any, long-range implications can be expected from these trends. Certainly there is a sense of concern. Both the UC administration and the California Postsecondary Education Commission, an independent legislative advisory panel, have been busying themselves in recent months collecting data about the university and attempting to make sense of the information. . . .

But there are many officials who have begun to wonder whether there are more serious problems ahead for the university.

"UC is still the greatest public university system in the country, if not the world," said William H. Pickens, director of fiscal analysis at the Postsecondary Education Commission. "But it's certainly becoming evident that the gap (between UC and the nation's other colleges and universities) is closing. . . .

"By any measure," Pickers said, "UC has just not kept up with the major systems (of higher education) across the country."

The University of California cannot expect a major change in the level of preparation of its students. Neither can it look to the community colleges to solve this problem. Thus, in order to ensure the quality of UC graduates, it seems to me there are two courses of action. Reduce the number of students admitted and take only those who have the competencies we expect, or, provide instruction and academic support to those who are admitted, such that at graduation, the integrity of their degree is maintained. In a Los Angeles Times article entitled "Winds of Change Are Shaking California's Perch at the Top of Education," David S. Saxon (1983) writes "We can't teach chemistry or French to students who can't do mathematics or can't read." Well put.

We will continue to have students arriving who can't do mathematics and can't read. And, over the next five to ten years, I expect more of the same--more students ill-prepared in mathematics, more students lacking writing skills, more students for whom English is not the first language, and more students for whom a college education has not been the norm for the family. I hope I have already provided all the reasons why I have these expectations.

We can continue to bemoan our fate, or we can view our current problems as an opportunity. David Saxon (1983) also made this observation:

Of course, California has a special interest in bringing under-represented groups into the mainstream of society. We are well on our way to becoming the first state whose population is made up predominantly of members of minority groups. But the issue is even broader than that. It is whether education, despite the obstacles and setbacks, will continue to play its traditional and essential role of providing opportunities for education to the limits of individual ability and talent.

It seems to me that the University of California must "provide opportunities for education to the limits of ability and talent" for those students we admit. This means that if they have not, for whatever reason, reached the level of skill we expect, we provide them that opportunity--through lower-division courses, through non-credit courses, through campus learning centers. Certainly, funds will be required. This was noted in the "Report to the Policy Committee on the University of California's Activities to Assist Underprepared Students" (University of California, 1981).

The University is spending a substantial amount of money and effort on courses and programs for underprepared students. Although the State provides General Fund money for courses and some SAA funds for assistance to students from underrepresented minorities, it has not yet recognized the University's need for more resources to teach the increasing number of small classes which basic skills training requires, and it has not assumed responsibility for funding the basic skills support programs that many of the University's students need. If current trends continue (and the decline in preparation shows no signs of abating, at least in the short run), the University is faced with a choice between continuing to drain its own resources for this purpose or asking students to pay even more for each others' basic skills training, unless the State provides relief (p. 68).

The authors' intent would appear to have been to ask for additional resources, either from students or the State, since underpreparation was expected to continue. Instead, CPEC and others have asked the University to reduce such activities. Clearly, such a reduction is unwarranted and inappropriate.

Report of the Office of the President

These and other arguments were considered by the Committee on Remediation formed by UC's Office of the President to prepare the response to CPEC's Promises to Keep. The eight member committee included faculty, staff, and students from different UC campuses and met periodically during the 9 month period from June, 1983 to February, 1984. Report drafts were circulated widely on the campuses and the final report begins by agreeing that remedial instruction has increased in the University.

The increasing number of entering University students who need some form of remedial instruction in order to undertake college-level work is a serious and continuing problem.

In 1980-81, David Saxon, then President of the University, commissioned a major study to determine the extent and nature of remedial instruction on the campuses, its cost, and possible ways of reducing the need for such instruction in the future. The study found that enrollments in courses defined as remedial by the campuses had increased substantially from 1975-76 to 1979-80, relative to the increase in entering freshmen: a 25.2 percent increase in remedial course enrollments in English and a 46.7 percent increase in mathematics, compared to an increase in new freshmen of only 9.2 percent.

This trend is especially disturbing because it has affected all categories of students in the University eligibility pool of the upper one-eighth of high school graduates, indicating a widespread decline in students' ability to do college-level work that cannot be reversed by any single solution or by focusing on particular groups. For example, 33 percent of Fall 1981 freshmen with 4.0 grade point averages (GPAs) and 49 percent of those with GPAs of 3.5 and above were held for the Subject A requirement.² (More detail on the characteristics of students held for Subject A appears in Appendix B.) The University has raised its admissions requirements in English (in 1981) and in mathematics (effective 1986) in an attempt to ensure that students will have the requisite academic skills. Unfortunately, increased admission requirements only ensure that students increase the number of high school courses they complete in specific subject areas; by themselves they do not guarantee that those courses teach appropriate subject matter at college-preparatory levels. (Results of the new Eligibility Study, due late in 1984, will help us assess the effectiveness of new standards in actually defining an eligibility pool of one-eighth.)

The University of California is not alone in seeing an increased need for remedial instruction in recent years. The widespread nature of the problem within California has been demonstrated in a recent report of the California Postsecondary Education Commission (CPEC), which expressed particular concern about the increasing cost of remedial instruction in the public segments of higher education and the appropriateness of offering such courses at the postsecondary level, especially if they carry credit toward a baccalaureate degree.³

In addition, this report underscores the problem of defining remedial education.

One of the problems in conducting a study of remedial instruction, as the CPEC report so clearly indicates, is the difficulty of defining "remedial."

For the University, the definition of remedial is further complicated because remedial instruction in the University is not necessarily the same as remedial instruction in other colleges and universities. Because the University draws its students from the top one-eighth of California's high school graduates, the level of preparation expected of students in introductory University of California courses is higher than that expected of students in many other colleges and universities.

In light of increasing concern about the extent of remedial instruction required, the University has undertaken a reexamination of this issue, with particular attention to the nature of such instruction and the feasibility of reducing both the need for UC-eligible students to be given remedial instruction and for the University itself to supply it.

The specific areas considered by the Committee were noted in the Report of the Office of the President.

This review of remedial instruction, undertaken by a Universitywide committee of faculty, administrators, and students, considered the following issues:

- the nature and present level of remedial instruction in the University of California;
- the appropriateness of these activities to the University's mission;
- the consequences of a substantial reduction in remedial instruction;
- possible alternatives to meeting the remedial needs of UC students in both the short term and long term;
- ways in which the University can work with high schools to improve students' academic preparation and thereby reduce the need for remedial instruction; and
- the feasibility of having high schools and community colleges assume a larger responsibility for providing the remedial assistance necessary to prepare students for work at the University.

In the report's closing section, entitled "Prospects for the Future," the authors assess the likelihood of increased preparation levels among entering students.

The future of remedial instruction in the University depends on whether or not the academic preparation of its entering students improves markedly in the years to come. Unfortunately, there are conflicting

indications of what the future will bring. On the one hand, public concern about the quality of primary and secondary education in the United States--and particularly in California--has reached such a high level that changes seem certain to occur. New legislation on education reform, the Superintendent of Public Instruction's concern about raising standards in the schools, increased funding for primary and secondary schools, and the efforts of businesses, colleges, and universities to work with schools should help reverse the slide in high school students' academic preparation for college. The University is optimistic about its efforts to work with the public schools, in cooperation with the other segments, to raise the standards of academic preparation among their students.

There are limits, however, to what the University's efforts with the schools can accomplish, given the number of schools and students in California, and limits to what the schools themselves can accomplish without a substantial increase in their financial support. Even taking the most optimistic view of the possibilities for reform in the public schools, it will nevertheless require some time for these reforms to make a significant impact at the University level. Students already in high school, who will make up the University's entering classes for the next three or four years, will receive proportionately less benefit from educational reforms being initiated now.

In addition, the University expects an increasing proportion of its student body over the next several years to be drawn from minority and low-income students; it also seems likely that increasing numbers of recent immigrants, who may have high grades in high school courses but have difficulty with the English language, will enter the University. Judging from past experience, these students will come from educationally disadvantaged environments and will be more likely to require remedial instruction than students from white, middle class backgrounds. It is inconsistent to work toward increasing access to the University for minority and low-income students and at the same time expect to eliminate remedial instruction in the near future.

This continuing need for remedial instruction presents some problems for the University now and in the future, because remedial courses are generally not offered for baccalaureate credit, and the State will not fund the instructional costs of noncredit courses. As a consequence, the University must fund these courses from other sources, and it must continue to fund them even if the number of students requiring them increases in years to come. The CPEC report, Promises to Keep, recognized this problem and recommended that the State fund all instruction, regardless of whether it carried baccalaureate or workload credit. The University concurs with this recommendation. The ultimate value to the State of properly educated college graduates is far greater than the cost of essential remediation.

Then, the report provides an official response to CPEC's recommendation to reduce remedial activities.

The University believes that it would be educationally irresponsible to force a reduction in remedial instruction on its campuses in the near future. The situations that make remedial courses and services necessary are not expected to improve markedly in the next five years, although there are indications that improvement may be expected in the longer term and that the need for these courses and services will gradually decline. Until that time, however, the University plans to continue working with the public schools to improve the academic preparation of high school students, while also maintaining the necessary level of remedial instruction to ensure that the academic standards for the University's baccalaureate degrees are maintained and that students admitted to the University--who represent the top one-eighth of high school graduates but are still not always fully prepared for University-level work--receive the assistance they need to overcome deficiencies in their academic preparation and to complete their degrees.

Experiments underway in cooperating with community colleges will be evaluated and extended where warranted; but it remains fundamentally the University's responsibility to help its students correct weaknesses in their academic preparation. The University must retain sufficient control over the remedial instruction needed to bring entering students up to its standards in order to guarantee that those standards remain at their current high level. As entering students' academic preparation improves, remedial instruction can be reduced accordingly.

Lastly, the report closes with 10 recommendations.

Recommendation One: The University, through the Academic Senate, should continue its work toward establishing common standards for remedial courses on all campuses and toward seeking solutions to the problem of student underpreparation. (See page 6.)

Recommendation Two: The University and the community colleges should cooperate to increase the number of students transferring from community colleges and to improve academic preparation of these students. (See page 11.)

Recommendation Three: The University should encourage experiments in providing remedial courses through the community colleges, expanding such courses where warranted. (See page 11.)

Recommendation Four: Building on the work of faculty in English and mathematics, the University should extend its work in defining expected standards of academic preparation to other disciplines. (See page 14.)

Recommendation Five: The University should expand its work in developing and administering diagnostic tests to assess students' academic preparation. It should also work more closely with the high schools, discussing the results of University-administered diagnostic tests and encouraging the schools to administer diagnostic tests at points early enough to allow correction of students' academic deficiencies before they enter the University. Funding of these activities should be secured from the State. (See page 14.)

Recommendation Six: University campuses should continue and expand cooperative, intersegmental partnerships with high schools and community colleges to improve the preparation of incoming freshmen and transfer students. (See page 18.)

Recommendation Seven: Faculty and administrators in the University's Schools of Education should be encouraged to play a leadership role in raising standards of the teaching profession and in looking for new ways to develop quality and leadership in teachers and administrators. (See page 18.)

Recommendation Eight: The University, along with other institutions of higher education, should take a more active role in the accreditation process for college preparatory programs at California's high schools. (See page 18.)

Recommendation Nine: To prevent the University from being financially penalized for offering remedial instruction that does not carry baccalaureate credit, the State should fund enrollments in remedial courses granting workload credit only. (See page 21.)

Recommendation Ten: The University should reassess the preparation of entering students at regular intervals to determine changes in students' need for remedial instruction, reducing the level of such instruction when warranted. (See page 21.)

Conclusion

CPEC's Promises to Keep, written in response to increased levels of remedial instruction previously documented in one UC report, called upon the UC and other segments to develop a plan to reduce remedial activities. This call engendered a thorough review by UC and careful examination of many issues related to the preparation of university students. After this review the University of California argued that a reduction in remedial activity in the near future would be educationally irresponsible.

Clearly, it is premature to reduce remedial activities until the preparation level of students entering the UC and other postsecondary institutions improves. The UC and other segments must work together with the secondary schools to improve preparation levels. But, until this is accomplished, necessary services must be provided to all who are admitted to higher education institutions. Otherwise, either the value of the baccalaureate degree would be undermined or underprepared students would enter without any chance for success.

CPEC's Promises to Keep has underscored a concern for the quality of post-secondary education and caused careful review of educational programs and policies to continue on the campuses and in the systems of three segments of California higher education. This is an example of the role such an agency can play and is in keeping with CPEC's charge, which is to assure "that the State's resources for postsecondary education are utilized effectively and efficiently."

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